

## **Committee on Resources, Subcommittee on Energy & Mineral Resources**

[energy](#) - - Rep. Barbara Cubin, Chairman

U.S. House of Representatives, Washington, D.C. 20515-6208 - - (202) 225-9297

## **Subcommittee on Forests & Forest Health**

[forests](#) - - Rep. Scott McInnis, Chairman

U.S. House of Representatives, Washington, D.C. 20515-6205 - - (202) 225-0691

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### **Witness Statement**

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**Oil & Gas Impacts of the  
Forest Service Roadless Rule  
Testimony to:  
Subcommittee on Energy and Mineral Resources  
of the Committee on Resources  
of the House of Representatives  
Washington, D.C.  
April 4, 2001  
Presented by:  
Jeffrey Eppink  
Vice President  
Advanced Resources International, Inc.**

Good afternoon, Chairwoman Cubin and members of the committee. My name is Jeffrey Eppink. I am a vice president with Advanced Resources International, an energy consulting firm based in Arlington, Virginia.

At Advanced Resources, we have conducted a number of oil and gas resource assessments in recent years. I participated in the National Petroleum Council's 1999 study on natural gas and am currently conducting a major study on the impacts of leasing stipulations upon natural gas resources, which I will elaborate upon later.

Today, I'd like to present an analysis that we conducted last fall concerning oil and gas resources associated with then-proposed Forest Service Inventoried Roadless Areas. We performed the study for the Department of Energy as a task under a multi-year technical and analytical support contract to the Department.

I will present first the conclusion from the study, discuss briefly how the study was conducted, and then present specific results.

The analysis shows the following:

- Nationwide, the vast majority of natural gas resources in Roadless Areas are found in the Rocky Mountain region. Undiscovered natural gas resources in the Rocky Mountains, impacted by the Roadless Areas, amount to 11 Tcf and are mostly contained in the largest nine plays.

- Less than 5% of the Roadless Area nationwide contain about 80% of the natural gas resources under those Forest Service lands.
- Implementation of Roadless Area Rule in the Rocky Mountain region will close to development an additional 9.4 Tcf of natural gas resource, raising the total estimated by the 1999 NPC Study from 29 Tcf to 38 Tcf, a significant 32% increase.
- Economic activity associated with recovery of natural gas resources associated with Roadless Areas is estimated to be \$23 to \$34 billion.

Next I'd like to briefly discuss how the study was conducted. The study was comprehensive; in all, we examined 19 Rocky Mountain provinces or basins and 208 plays. The map to my left shows the Rocky Mountain region that was covered in the study -- New Mexico to Montana plus a portion of North Dakota. This region contains the vast majority of oil and gas on federal lands. The red areas on the map depict the so-called "Inventoried Roadless Areas", areas which, without road access, would effectively prohibit oil and gas resource development. Shown on the map in the light green are areas with underlying oil and gas resources. In dark red within Roadless Areas are areas of high slopes -- mountain tops, ridges, etc., which we assumed to be less prospective because they would be locations where it is physically difficult to site a drill rig or because they are could represent difficult geological settings for oil and gas to occur.

We used resource estimates from several expert groups in the analysis. The vast majority of resource data was taken from the USGS 1995 National Assessment. For a few selected plays where analysis had been conducted subsequent to the 1995 Assessment, we supplemented the USGS data with resource estimates conducted by Advanced Resources (for the Department of Energy), the Utah Geological Survey and the Potential Gas Committee (an industry group).

The areas of occurrence of resources in the analysis is defined by the intersection of the plays themselves with the Roadless Areas. Estimates of high, low and mean technically recoverable oil and gas resources were made. High estimates have low probability for occurring; conversely, low estimates have a high probability for occurring. Technically recoverable resources are those that are recoverable using current technology.

The results, presented in the table below, show that the Roadless areas contain from about 3 to 23 Tcf of natural gas, with a mean value of 11 Tcf. The Roadless Areas also contains from minor amounts to over 1 billion barrels of oil, with a mean value of 550 million barrels of oil.

<b><i>Technically Recoverable Resources</i></b>	<b>Natural Gas</b>			<b>Petroleum</b>		
	<b>(Tcf)</b>			<b>(MMBO)</b>		
	<b><u>High</u></b>	<b><u>Mean</u></b>	<b><u>Low</u></b>	<b><u>High</u></b>	<b><u>Mean</u></b>	<b><u>Low</u></b>
Inventoried Roadless Areas	23.1	11.3	3.5	1,212	550	69
Rocky Mountain Region	641	323	119	17,574	8,218	1,456

Further in the analysis, we examined the issue of access using guidelines established in the 1999 NPC study (see table below). We determined that, for the Rocky Mountains:

- Implementation of the Roadless Areas will close to development an additional 9.4 Tcf of gas, raising the total to 38 Tcf from the 29 Tcf presented in the NPC Study, a significant 32% increase.
- Resources subject to access restrictions will increase by 7 Tcf (resource formerly under Standard

Lease Terms), from 137 to 144 Tcf.

<b>NPC Categorization</b>	<b>Pre-Roadless Areas Resource (Tcf)</b>	<b>Implementation of Roadless Areas Resource (Tcf)</b>
Standard Lease Terms	7.0	-
Available with Restrictions	2.4	-
Closed to Development	1.9	11.3
<b>Total</b>	<b>11.3</b>	<b>11.3</b>

To examine the economic impacts for eliminating access to these technically recoverable resources, we also provided a cursory examination of economically recoverable natural gas resources. Based on the mean resource values and prices of \$3/Mcf and \$4/Mcf, about 68 to 75% of the technical natural gas resources could be recoverable economically, representing \$23 to \$34 billion of economic activity, respectively.

We also estimate that the nine largest plays in the study areas comprise about 83% of the total impacted natural gas resources (please see the map). We determined that these nine plays represent less than 5% of all roadless areas nationwide.

I had mentioned earlier that we are conducting ongoing resource studies. As a follow-up to the 1999 NPC study, we are currently concluding a major study of the cumulative impacts upon undiscovered natural gas resources of leasing stipulations. We are conducting that study on a detailed township-by-township basis. The study we are just now concluding covers Southern Wyoming and northwestern Colorado (the Greater Green River Basin). Preliminary results show that over 60% of the natural gas resources are either closed to development or available with restrictions. We will next be examining the Uinta-Piceance Basin in Utah and Colorado. The studies are being conducted for the Department of Energy and we would be happy to share those results with you when they are available.

I appreciate the opportunity to present our Roadless Areas analysis to you and would be glad to answer any questions you might have.

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